

Application No.: 09/641149
Docket No.: CL1375USCIP

Page 2

Amendments to Claims

Claim 1 (currently amended): A composition comprising (a) a polymer comprising at least ~~80~~ 95 mol-% of oxymethylene repeat units; (b) about 1%-30% by volume of a mineral filler having an aspect ratio of 5 or less, the filler having an average equivalent spherical diameter in the range of about 0.1 to less than about 3.5 micrometers; and (c) a saturated organic acid, salt thereof, or a mixture thereof, at a concentration of at least about 0.5% by weight of the mineral filler.

Claim 2 (original): The composition according to Claim 1 wherein the composition comprises about 5-30% by volume of a mineral filler.

Claim 3 (original): The composition according to Claim 1 wherein the composition comprises about 10-20% by volume of a mineral filler.

Claim 4(original): The composition of according to Claim 1 wherein the average equivalent spherical diameter is about 0.5 to about 2 micrometers.

Claim 5 (original): The composition according to Claim 1 wherein the concentration of saturated organic acid, salt thereof, or mixture thereof is in the range of about 0.5-4% by weight.

Claim 6 (original): The composition according to Claim 1 wherein the saturated organic acid, salt thereof, or mixture thereof comprises one or more saturated fatty acids, salts thereof, or a mixture thereof.

Claim 7 (original): The composition according to Claim 6 wherein the saturated fatty acid is stearic acid.

Claim 8 (original): The composition according to Claim 4 wherein the saturated organic acid is stearic acid at a concentration of about 2% by weight on the weight of the filler.

Claim 9 (previously presented): The composition according to Claim 1 wherein the mineral filler is calcium carbonate or titanium dioxide.

Claims 10-14 (canceled)

Application No.: 09/641149
Docket No.: CL1375USCIP

Page 3

Claim 15 (previously presented) A molded article comprising the composition of Claim 1.

Claims 16 (withdrawn): A process for forming a composition, comprising the steps of combining a hydrocarbon polymer having a backbone comprising repeat units, at least 80 mol-% of which repeat units comprise one or more oxygen or nitrogen atoms disposed in said backbone, with a mineral filler having an aspect ratio of less than 5, the mineral filler having an average equivalent spherical diameter in the range of about 0.1 to about 3.5 micrometers, and a saturated organic acid, salt thereof, or a mixture thereof, at a concentration of at least about 0.5% by weight of the mineral filler, the mineral filler and the hydrocarbon polymer being combined at a weight ratio given by the formula:

$$W_f/W_p = [VF/(1-VF)] \cdot D_f/D_p$$

where W_f is the weight of the filler, W_p is the weight of the polymer, VF is the desired volume fraction of filler, in the range of about 0.01-0.3, D_f is the density of the filler, and D_p is the density of the polymer;

heating the combination to a temperature above the melting point of the hydrocarbon polymer to form a molten composition;

mixing the molten composition to provide a homogenous melt; and,
cooling the molten composition.

Claim 17 (withdrawn): The process of Claim 16 wherein VF is in the range of about 0.1-0.3.

Claim 18 (withdrawn): The process of Claim 16 wherein VF is in the range of 0.1-0.2.

Claim 19 (withdrawn): The process of Claim 16 wherein the average equivalent spherical diameter is about 0.5-2 micrometers.

Claim 20 (withdrawn): The process of Claim 19 wherein the saturated organic acid, salt thereof, or mixture thereof comprises saturated fatty acids, salts thereof, or a mixture thereof.

Claim 21 (withdrawn): The process of Claim 20 wherein the saturated organic acid is stearic acid at a concentration of about 2% by weight on the weight of the filler.

Claim 22 (withdrawn): The process of Claim 20 wherein the saturated fatty acid is stearic acid.

Application No.: 09/641149
Docket No.: CL1375USCIP

Page 4

Claim 23 (withdrawn): The process of Claim 16 wherein the inorganic filler is calcium carbonate or titanium dioxide.

Claim 24 (withdrawn): The process of Claim 16 wherein the comonomer units are ethylene oxide units.

Claim 25 (withdrawn): The process of Claim 13 wherein the hydrocarbon polymer is selected from the group consisting of polyacetal, polyamide, and polyester.

Claim 26 (withdrawn): The process of Claim 16 wherein the hydrocarbon polymer is polyoxymethylene homopolymer.

Claim 27 (withdrawn): The process of Claim 16 wherein the hydrocarbon polymer is a copolymer comprising repeat units of oxymethylene and up to 10 mol-% of oxyalkylene repeat units having adjacent methylene groups.

Claim 28 (withdrawn): The process of Claim 16 wherein the hydrocarbon polymer is nylon 66 or nylon 6.

Claim 29 (withdrawn): The process of Claim 16 wherein the hydrocarbon polymer is polyethylene terephthalate or polybutylene terephthalate.

Claim 30 (withdrawn): The process of Claim 16 further comprising the step of forming a shaped article.

Claim 31 (canceled)

Claim 32 (canceled)